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The Impact of Suicide Prevention Gatekeeper Training on College Students

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The Impact of Suicide Prevention Gatekeeper Training on College Students

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The Impact of Suicide Prevention Gatekeeper Training on College Students

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Despite its potential to enhance the mental health of college student populations, the efficacy of gatekeeper programs in connecting suicidal students with professional help is unclear. Potential negative side effects of peer helping programs, such as gatekeeper training, are rarely examined and there is not a sufficient body of evidence documenting the efficacy or safety of peer helping programs, despite their widespread use. The challenge of implementing a safe and effective peer based gatekeeper campus suicide prevention effort lies in balancing the benefits of connecting suicidal students to professional help more often and sooner, with the potential adverse mental health impacts of participation on gatekeepers.

This study examines how a gatekeeper training program might increase suicidal student help seeking and measures the mental health impact of participation on Resident Assistants (RAs) trained in suicide prevention. This study will explore whether a more intensive helping role by the RA amplifies the effect of referring and securing

professional help for suicidal students. This study also measures how differing the intensity of help provided by RAs impacts the gatekeepers' own stress and suicidality levels. RAs will be trained under high versus low intensity helping conditions. RAs in the low intensity helping condition will be trained to identify potentially suicidal students and refer them for professional help. RAs in the high intensity helping condition will be trained to identify potentially suicidal students, engage them in a quasi-professional helping role, and refer them to professional help. This study will also explore whether promotion of telephone counseling as a helping resource will impact referrals to and utilization of professional help, either in-person or through telephone counseling.

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Chapter 1: Introduction

Suicide is the third leading cause of death for youth between 15 and 24 years old and is believed to be the second leading cause of death among college students (Centers for Disease Control and Prevention [CDC], 2006; Suicide Prevention Resource Center [SPRC], 2004). In addition to completed suicide, students experience a range of suicidal symptoms including distressing and morbid thoughts, suicidal ideation, and suicide attempts that impact their ability to perform to their potential in both academic and non-academic spheres (Drum, Brownson, Burton Denmark, & Smith, 2009; SPRC; Garland & Zigler, 1993). Suicidal experiences also appear widespread within the college student population as Drum and colleagues found that over half of the undergraduates surveyed reported having experienced some form of suicidal ideation during their lifetime. While some use the term *suicidality* to include a range of suicidal experiences including completed suicide, its use throughout this study will match the scope of the proposed intervention and will be limited to include suicidal behaviors of ideation through attempt (Freedenthal, 2007).

College student suicide is a significant concern on university campuses, yet suicidal students often underutilize professional help. In some cases students may lack awareness of mental health resources (Cook, 2007; Westefeld et al., 2005). In other cases, students may be reluctant to seek the help they need due to stigma and other pressures (Cook). Compounding the problem of the disconnect from professional help, suicidal students can be difficult to detect in the population as some research suggests that only

approximately one-third of adolescent suicide victims appeared to satisfy clinical criteria for depression or other mental illness (Shaffer, et al., 1988 as cited in CDC, 1992).

The disconnect between college students and campus professional mental health services is unfortunate because college counseling centers appear effective in helping suicidal students who present for treatment (Drum et al., 2009; Schwartz, 2006). Suicidal students would likely benefit not only by utilizing professional help more often, but also by acquiring help sooner. Delays in receiving help increases the risk for suicide as evidenced by the finding of Gagnon, Davidson, Cheifetz, Martineau, and Beauchamp (2009) where 72% of adolescents and young adults complete suicide on the first attempt. Treating distressed students prior to or in the early stages of their manifestation of suicidality would likely improve clinical outcomes. Waiting to treat students until they are in a suicidal crisis can be difficult, time consuming, and can result in an over-allocation of resources to crisis intervention (Baumeister, 1990; Drum et al.). Consequently, increasing the number of suicidal students seeking help and shortening the period between the onset of distress and the acquisition of professional help by suicidal students are important yet challenging goals for campus mental health centers.

While suicidal students may underutilize professional help, they often seek out their peers to disclose their suicidal ideation (Drum et al., 2009; Gould, Greenberg, Velting, & Shaffer, 2003; Kalafat & Elias, 1994; Lewis & Lewis, 1996; Wyman et al., 2008). Tapping into existing peer social networks appears to be a promising means of connecting suicidal students with professional help. Not only do suicidal youth tend to turn to their peers to disclose their suicidal ideation, but many of the negative coping

mechanisms that college students often turn to in times of stress are more easily identified by peers than mental health professionals (Cook, 2007). Unfortunately, when suicidal students confide in others, the help may not always be effective as only 58% are advised to seek professional help by the first person they tell (Drum et al.). Based on these findings it appears that a primary component of suicide prevention on college campuses lies in improving the ability to connect students in distress with professional helping resources (Westefeld et al., 2006).

The magnitude of the problem of college student suicidality and the challenges of connecting students with professional help has led many campuses to develop suicide prevention programs that attempt to tap into peer social networks. University gatekeeper training is one of the most frequently employed suicide prevention interventions. Gatekeeper programs attempt to increase suicidal student engagement in utilizing professional assistance through training non-mental health professionals to serve as referral agents. The "gatekeepers" are generally teachers, advisors or Resident Assistants (RAs) who exist in the everyday world of the student and have significant contact with them (CDC, 1992). Gatekeepers are chosen because of their proximity to the student as well as the likelihood that they will have a pre-existing relationship with the suicidal student. As such, gatekeepers may be more likely to notice that the student is experiencing distress, be in a position to address their concerns with the student, and refer them to professional help.

Despite its potential to enhance the mental health of college student populations, the efficacy of gatekeeper programs in connecting suicidal students with professional

help is unclear. Potential negative side effects of peer helping programs, such as gatekeeper training, are rarely examined and there is not a sufficient body of evidence documenting the efficacy or safety of peer helping programs, despite their widespread use (Gould et al., 2003; Lewis & Lewis, 1996). RAs in particular may be vulnerable to stress due to increased role responsibility and a contagion effect where the suicidality of the distressed student impacts the RA (Gould & Kramer, 2001; Range, Goggin, & Steede, 1988; Rudd et al., 2006; Spirito, Brown, Overholser, & Fritz, 1989). In addition to uncertainty in outcomes for suicidal students, gatekeeper training programs present a dilemma for campus mental health centers as the fairly rapid transition of students through college creates a challenge for sustaining a suicide prevention program based on student peer helpers (Schwartz & Friedman, 2009).

The challenge of implementing a safe and effective peer based gatekeeper campus suicide prevention effort lies in balancing the benefits of connecting suicidal students to professional help more often and sooner, with the potential adverse mental health impacts of participation on RAs. Success of these programs may hinge on the ability to engage RAs in more intensive interpersonal connection with suicidal students while also bolstering their ability to endure such connection. In an effort to achieve this balance, gatekeeper training models vary in the role peers play. Some models limit the gatekeeper's responsibility to listening and reporting warning signs, while others train them to be more available and capable of counseling high risk peers (Gould et al., 2003; Herring, 1990; Lewis & Lewis, 1996).

This study examines how a gatekeeper training program might increase suicidal student help seeking and measures the mental health impact of participation on RAs. RAs will be trained under high versus low intensity helping conditions. This study will explore whether a more intensive helping role by the RA amplifies the effect of referring and securing professional help for suicidal students. This study also measures how differing the intensity of help provided by gatekeepers impacts the RAs' own stress and suicidality levels. RAs in the low intensity helping condition will be trained to identify potentially suicidal students and refer them for professional help. RAs in the high intensity helping condition will be trained to identify potentially suicidal students, engage them in a quasi-professional helping role, and refer them to professional help.

This study also examines the use of telephone counseling as an anonymous professional helping source. Telephone counseling may be a form of professional help that is easier to access for suicidal students because the student can remain anonymous, thereby lowering the help seeking threshold for reluctant students. It can also be viewed as a transitional form of help where the staff may assist suicidal students in accessing in-person professional help. This study will explore whether promotion of telephone counseling as a helping resource will impact referrals to and utilization of professional help, either in-person or through telephone counseling. The author anticipates that making successful referrals of suicidal students to professional help will decrease RA stress. Understanding the mental health impact on RAs may help campus counseling centers implement gatekeeper training programs that increase suicidal students'

utilization of professional help while also safeguarding the students who serve as gatekeepers.

Chapter 2: Integrative Analysis

The following integrative analysis describes the current research on the problem of college student suicide and suicidality, student underutilization of professional mental health services, and the efficacy of campus counseling centers in treating suicidal students. It then explores the barriers to suicidal student disclosure of their ideation and how university counseling centers are responding with suicide prevention programs. This study focuses on one aspect of campus suicide prevention; gatekeeper training programs. It provides an overview as to why these programs are used, how they are structured, the potential impact on suicidal students and RAs, and the utilization of telephone counseling as a source of anonymous professional help and as a gateway to in-person professional help.

The problem of suicide and suicidality on college campuses

Viewing suicidal experience as existing on a continuum of distress enables college counseling centers to approach campus suicide as a public health concern, with resources allocated to both crisis intervention and prevention (Drum et al., 2009; Garland & Zigler, 1993; SPRC, 2004). In a large-scale national self-report survey of over 26,000 students at 70 colleges and universities, Drum and colleagues found that over half of the college students surveyed self-reported some form of suicidal thinking over the course of their lives. In addition, during the prior 12 months students expressed a range of levels of severity in their distressed thinking.

Study results indicate that in the preceding 12 months 37% of undergraduates reported they had thought "I wish this would all just end", 11% thought "I wish I was dead", 6% endorsed seriously considering attempting suicide, and 1% claimed they had attempted suicide (Drum et al., 2009). The American College Health Association's national survey of college student health found a slightly higher rate of suicidal ideation and a similar rate of attempts among students. Of their 80,121 college student respondents, 8% reported they had seriously considered suicide within the past school year and 1% claimed they had attempted suicide (American College Health Association, 2008). The rate of completed suicide is approximately 6.5 to 7.5 per 100,000 students (Schwartz, 2006; Silverman, Meyer, Sloane, Raffel, & Pratt, 1997).

To elucidate the scope of the problem, Table 1 presents the percentages and number of student responses at a hypothetical university of 35,000 undergraduate students.

Table 1: Suicidality at a hypothetical university of 35,000 undergraduates

Suicidal experience reported in past 12 months	Percentage Reporting	Number of Students Reporting
Thought "I wish this would all just end"	37%	12,950
Thought "I wish I was dead"	11%	3,850
Seriously considered suicide	6%	2,100
Attempted suicide	1%	350
Died by suicide	0.007%	2.5

Passage of the Garrett Lee Smith Memorial Act in 2004 by the U.S. House of Representatives further demonstrates the importance attributed to preventing college student suicide. This act provided $82 million to address college suicide and supports the Surgeon General's National Strategy for Suicide Prevention to increase evidence based programs to prevent suicide on college campuses (Westefeld et al., 2005).

Suicidal and distressed students underutilize professional help

Despite the prevalence of mental health issues reported on campus, only 26% of students appear to be aware of the mental health resources at their university (Westefeld et al., 2005). Almost half of suicidal students don't tell anyone about their suicidal ideation and those who do tend to tell peers rather than professionals (Drum et al., 2009). Perhaps most telling, nearly 80% of students who complete suicide never receive services at their campus counseling center (Gallagher, 2004; Kisch, Leino, & Silverman, 2005).

Suicidality is not the only mental health condition for which students are reluctant to seek professional help. A survey of 1,455 college students showed that 53% of students stated they had experienced depression since beginning college, but only 17% reported they sought help for it (Furr, Westefeld, McConnell, & Jenkins, 2001). It is unfortunate that students do not seem to have a natural inclination to seek help more often as most depressed students find these services helpful (Furr et al.).

Constraints on campus counseling centers

Campus counseling centers are increasingly taxed with higher demand for services and increased role responsibility. Some research suggests that college counseling

centers may be called on to help more students than in the past (Schwartz, 2006; Schwartz & Friedman, 2009). A national survey of college counseling center counselors found that 84% perceived a recent increase in enrollment of students with more serious psychological problems than in the past five years (Gallagher, 2002 as cited in SPRC, 2004).

Universities, and counseling centers in particular, may also experience greater role responsibility in caring for suicidal students and be called upon to serve in the role of *in loco parentis*. Some courts appear increasingly willing to impose a duty on colleges to prevent student suicides through finding a "special relationship" with them (Gray, 2007). As a result, some universities are adopting forced leave policies as well as mandating assessment for suicidal students (Drum et al., 2009; Schwartz & Friedman, 2009; Westefeld et al., 2006).

Campus counseling centers find themselves in the position of balancing between working to improve the mental health of all students and managing resource constraints. While students who utilize professional help appear less likely to attempt suicide, meeting the needs of all suicidal students through the counseling center could require up to a 75% increase in counseling staff (Drum et al., 2009; Schwartz, 2006). These factors complicate the ability of counseling centers to know at what level they should or can intervene with distressed students. Drum and colleagues suggests adopting a problem-focused paradigm that incorporates early identification and intervention. They caution that focusing on the crisis stage of intervention results in a failure to capitalize on opportunities to prevent development of suicidal symptoms and an over-allocation of

resources to crisis intervention. Implementing suicide prevention programs may be an effective way to utilize resources to improve the mental health of many students.

The disclosure barrier of suicidal students

Increasing suicidal students' professional help seeking is an important yet challenging goal. A primary component of this challenge lies in reducing the disclosure barrier of suicidal students. The magnitude of the problem of college student suicidality and the corresponding disconnect of students from professional help suggest that universities and students would benefit by facilitating the connection between suicidal students and helping resources. Examining ways to utilize existing peer networks offers promise to expand the ability of campus counseling centers to reach suicidal students more often and more quickly. Understanding who peers seek help from and why they choose to disclose or conceal their suicidal ideation informs how peer networks might be utilized to lower the disclosure barrier of suicidal students.

Suicidal student disclosure: A peer-to-peer phenomenon

While suicidal experiences appear widespread on college campuses, many students do not disclose their troubling thoughts. Those that do tend to tell peers rather than professionals. Drum et al. (2009) found that 46% of undergraduate students surveyed did not tell anyone about their suicidal thoughts. Of the 54% of students who did confide in others regarding their suicidal thoughts, two-thirds tended to turn to their peers, including partners, roommates, and friends for help (Drum et al.). Other research confirms the tendency of adolescents to confide in their peers, rather than turning to adults and professionals, regarding their suicidal ideation (Gould et al., 2003; Kalafat &

Elias, 1994; Lewis & Lewis, 1996; Wyman et al., 2008). Suicidal students may confide in their peers due to their growing autonomy from adults, mistrust of adult helpers, and a sense of importance in keeping confidants of peers (Kalafat & Elias, 1995).

While suicidal students may confide in their peers, peers do not appear particularly effective in helping suicidal students utilize professional help. Peers seem to have difficulty in either distinguishing the level of risk in suicidal students or effectively referring them for help as they are less likely to refer high risk than low risk students to professional help (Drum et al., 2009). In addition, only 58% of students who disclosed their suicidal ideation to others were advised by the first person they told to seek professional help (Drum et al.).

Suicidal student concealment

A primary reason college counseling centers implement gatekeeper training programs is to identify and direct suicidal students to professional help (Schwartz & Friedman, 2009; Wyman et al., 2008). Understanding why students choose to conceal their ideation could help campus counseling centers tailor their suicide prevention interventions to decrease the disclosure barrier as well as the threshold of engagement for help. Attracting students who are reluctant to disclose their suicidal ideation to treatment is important as their concealment increases their risk for suicide. By concealing, these suicidal students decrease their opportunity to both get help to reduce stressors and to bolster protective factors. Understanding reasons for concealment could increase the sensitivity of those seeking to detect suicidal students and improve the personalization of the referral process for professional help.

A. Burton Denmark (personal communication, December 22, 2009) conducted a qualitative analysis based on the data presented in the Drum et al. (2009) study to examine the reasons college students provided for concealing their ideation. The categories of reasons, response size, and percentage of total response are presented in Table 2. The results presented in Table 2 reflect the total number of reasons given for concealment where participants were able to list more than one reason for their decision not to disclose.

Peer based gatekeeper programs may be tailored to address students' disclosure concerns. For instance, the most common reason for concealment was the students' perception that their ideation posed a low risk to themselves. However, many of those responding with low risk as a reason also indicated that their suicidal thoughts were recurrent and had resulted in suicide attempts (A. Burton Denmark, personal communication, December 22, 2009). In addition, research indicates that students may underestimate the recurrence risk of suicidal ideation as evidenced by the finding that 29% of the undergraduate students surveyed said that they experienced either a few or repeated episodes of suicidal thoughts over their lifetime (Drum et al., 2009). With this understanding, gatekeepers can encourage suicidal peers to seek help, even when students perceive a low risk to themselves, by explaining that a failure to seek treatment for their suicidal thoughts may contribute to a return of suicidality at a later point in time.

Most of these reasons for concealment can be addressed through gatekeeper training to encourage disclosure. Unfortunately, the group of concealers that may be the most difficult to reach may also be at the greatest risk. This group is the 7% who stated

that they did not want to disclose because they perceive others could try to thwart their attempt.

Table 2: Reasons for Concealing Suicidal Ideation

Category	N (723 Thematic Responses)	%
Low Risk of harming self	139	18%
Solicitude (i.e. not wanting to impose on others)	122	16%
Privacy	118	15%
Pointless	102	13%
Stigma	102	13%
Shame	56	7%
Repercussions	54	7%
Interference (i.e., not wanted to be interfered with in their attempt)	51	7%
Perceived Lack of Confidants	25	3%

Suicidality is a problem on college campuses that is compounded by the lack of disclosure by suicidal students. To encourage disclosure and connection of suicidal students to professional help, campus counseling centers are turning to peer networks to help reach students. Gatekeeper training programs have emerged as a means of closing the gap between suicidal students and campus professional helping resources.

Gatekeeper training programs

Gatekeeper programs seek to expand the expertise in suicide intervention beyond the campus counseling center to peer based gatekeepers who interact more frequently and directly with students. Turning the training focus from within the college counseling center to gatekeepers is theorized to result in earlier detection of students' mental health issues and more efficient referral to appropriate resources (Rihmer, 1996). This is especially important as these programs respond to concern expressed by some researchers that relatively little is being done to systematically identify at-risk students prior to suicidal behavior and direct them into treatment (Haas, Hendin, & Mann, 2003). Incorporating peer assistance in a suicide prevention model also seems particularly appropriate on college campuses as it aligns with Erik Erikson's theory of development, where adolescents increasingly turn from their parents and rely on peers for advice and support (Muuss, 1995). As evidence of this trend, students who choose to disclose their ideation tend to tell their peers first (Drum et al., 2009).

Gatekeeper programs operate within the broader context of a university's suicide prevention program. Comprehensive suicide prevention programs would implement multiple interventions to achieve two broad goals: 1) reduction of risk factors and increasing protective factors for students, and 2) early detection and utilization of existing mental health resources (CDC, 1992). Gatekeeper training is an important element of suicide prevention as it strives to address the second goal to increase early detection and utilization of professional help. Gatekeeper programs have a restricted role in reducing suicidality on campus as they are situated within the broader realm of preventative

interventions. Even within this restricted role of identification and referral, gatekeeper programs differ in terms of comprehensiveness and who on campus is trained to be a gatekeeper. While gatekeeper programs promise benefits to suicidal students by providing increased awareness and skills to their peers, there is no proof of their effectiveness and there are concerns that placing students in the role of helping suicidal peers may have deleterious effects.

Overview of gatekeeper training

Gatekeeper programs prepare peer "gatekeepers" to identify signs of suicidality, determine the level of risk, manage the situation, and direct students to professional mental health resources (Gould et al., 2003; Gould & Kramer, 2001, Weber, Metha, & Nelsen, 1997; Wyman et al., 2008). A potential gatekeeper can be anyone who has significant contact with students during the course of the day (CDC, 1992). Gatekeeper programs increase the availability of peer helpers trained specifically in suicide intervention beyond what is normally available in the students' living environment. These programs often attempt to tap into extant peer to peer social networks, decrease student concealment of their suicidal ideation and the threshold of engagement for help, increase the sensitivity of detection of suicidal students, and provide a personalized referral process for them.

Training Resident Assistants as gatekeepers

Gatekeeper training programs target three primary audiences to enhance the connection between suicidal students and professional help. Programs may train staff,

staff assistants, or students to interact with suicidal students. The current study will focus on the training of RAs, as students who function as both peers and staff assistants.

University counseling centers are utilizing RAs as gatekeepers to extend the centers' reach by having RAs serve as their eyes and ears to identify suicidal students. Training RAs as gatekeepers is particularly appealing as a form of suicide prevention as RAs address several of the challenges of connecting suicidal students with professional help through their access to peer networks. In addition, utilizing RAs as gatekeepers is important as freshman students living in resident halls may be particularly vulnerable to suicidal experiences. Freshman students in particular are subject to significant life transitions which may exacerbate existing psychological problems, trigger new ones, increase symptoms of depression and anxiety, and leave them without their old social supports (SPRC, 2004).

The concept of training RAs as gatekeepers in order to help decrease the disclosure barrier of suicidal students has empirical support (Schwartz & Friedman, 2009). In addition, RAs appear well suited to function as gatekeepers for several reasons. First, RAs function in a quasi-professional role where their status as students may help them connect with other students more easily than older adults. Considering that students contemplating suicide are more likely to tell a peer than a professor or other adult about their plans, training people who are perceived more like peers than professionals may encourage disclosure by suicidal students (Drum et al., 2009; Lewis & Lewis, 1996). Second, RAs may receive personal benefits from gatekeeper training in terms of increased awareness of their own mental health issues (Drum et al.). Third, since RAs

exist in the living environment of students, gatekeeper training may serve to enhance social supports. Developing social supports has been described as one of the most important protective factors for college students and there is strong evidence that having friends, being involved in extra-curricular activities, and having strong connections are all important protective factors (Westefeld et al., 2006). Fourth, when students transition from high school to college they are not supervised as closely and are called on to become more self-sufficient. Having parents around to detect behavioral changes in high school students provides an observational base that is not present when new students arrive at college. RAs may be able to partially fill this role.

Impact of gatekeeper training on helpers

Impact on professionals when working with suicidal clients

Even the most seasoned professional clinician can become unnerved by working with suicidal clients (Collins, 2003; Hendin, Haas, Maltsberger, Koestner & Szanto, 2006). Professional clinicians are often highly trained to work with suicidal clients and have established professional support networks to help them manage the stress of their work. For instance, professional counselors staffing telephone based suicide hotlines are advised to engage in self-care following an intervention with a suicidal client, including debriefing, taking time away from the phone, and considering who to call if the helper feels upset or distraught later (United States Department of Health and Human Services, 2001). RAs, however, lack both the level of training and the extensive professional support network to support their work with suicidal students. Examining the impact of

exposure to suicidal peers on RAs is important based on the evidence that working with suicidal clients can have significant mental health impacts on professionals.

Impact of gatekeeper training on Resident Assistants

The efficacy of gatekeeper training programs and their impact on college student helpers is understudied (Garland & Zigler, 1993; Gould et al., 2003; Haas et al., 2003; Joiner, 2009; Lewis & Lewis, 1996; Schwartz & Friedman, 2009; Westefeld et al., 2006; Wyman et al. 2008). Further, suicide prevention programs may have unforeseen negative consequences and the potential negative side effects of gatekeeper training programs are rarely examined (CDC, 1992; Gould et al.). To reduce risk to suicidal students on campus, suicide prevention programs may be hastily implemented with potentially deleterious effects (Garland & Zigler). While attempting to destigmatize suicide, these programs may inadvertently normalize suicidal behavior as a reaction to common stressors rather than viewing suicidality as resulting from psychopathology. Suicide prevention programs may also inadvertently reduce potentially protective societal taboos and leave adolescents with a message linking suicide with stressful experiences.

Exposure to suicide prevention curriculum

A gatekeeper training curriculum can pose risks to RAs. Research indicates that the suicide prevention training content may impact students differently based on their gender and prior exposure to suicidal experiences. For instance, male students displayed more hopelessness and maladaptive coping responses following exposure to a suicide prevention curriculum presented to 215 high school students (Overholser, Hemstreet, Spirito and Vyse, 1989). The authors noted that male students were more likely to feel

that discussing suicide could increase a person's risk for actually attempting it. They suggested that exposure to the curriculum may have made it less likely that the men would be able to deal with their suicidal experiences in a constructive manner (Overholser et al.).

Some students receiving suicide prevention training in a study of 758 high school students felt that exposure to the program had worsened any emotional problems they or a friend might have had (Shaffer, Garland, Vieland, & Underwood, 1991). Importantly, students reporting a prior suicide attempt were more likely to show a negative reaction to the curriculum than those who did not. Kalafat and Elias (1994) also found potential adverse impacts of a suicide prevention curriculum. In their study of 136 high school students exposed to a suicide prevention curriculum, 3% rated the training "upsetting".

Some research suggests that those with prior suicidal experiences may react differently to new content regarding suicide than those without prior experience (Doron et al., 1988). Rudd et al. (2006) examined 92 undergraduate college students and found that students asked to memorize a list of suicide warning signs scored lower on emotional distress than students asked to memorize a list of heart attack warning signs. While this study implies that between the training conditions, suicide prevention training may be less emotionally impactful on its recipients than heart attack prevention training, it fails to compare the impact on students before and after training. It is also important to consider that prior suicidal experiences may create a numbing effect towards new suicidal experiences. A risk is that exposure to new suicidal experiences may fail to alert the

student to the problem at hand. Gould (2001) suggested that prior suicidal behavior may moderate the imitative effect of exposure to suicidal content.

Suicide prevention programs may also exaggerate the incidence of suicide in the population in an attempt to increase awareness and concern about the problem (Garland & Zigler, 1993). The danger of exaggeration is that students may perceive suicide as a more common and more acceptable act. Students may also come to closely identify with the problems portrayed by the case example provided in the training and may see suicide as a solution to their problems (Garland & Zigler). These issues are important as the high stress related to student suicide and the urgency felt at many universities may lead them to act quickly to implement gatekeeper training programs. As this study examines the impact of gatekeeper training on RAs, important factors to consider include the impact on the resiliency of the RAs and the potential for contagion from exposure to working with suicidal peers.

Resident Assistant resiliency

Resiliency can be viewed as a characteristic of the peer helper where lower levels of resiliency may lead to increased vulnerability to stress and suicidality. Exposure to suicidal students may impact RAs by making them more vulnerable to stress and additional suicidal experiences. This is demonstrated in that exposure to someone else's suicide is a core principle in assessing the risk of someone seeking help for suicidality (The United Stated Department of Health and Human Services, 2001).

Research suggests that experience with suicidal peers influences whether and how students will intervene in the future. In a study of 325 high school students, those who

knew a peer who had committed suicide were less likely to intervene directly with a suicidal peer than those who did not know a peer who committed suicide (Kalafat & Elias, 1992). The authors speculate that the negative impact of interacting with suicidal peers may lead students to develop negative or avoidant attitudes towards suicidal peers (Kalafat & Elias, 1994). Therefore, program evaluation measures should be designed to identify such potential consequences.

Suicidal contagion

Unlike resiliency, suicidal contagion can be viewed as a population dynamic. The effect of contagion is to leave the population vulnerable to acting out in response to its influence (Gould, 2001). RAs may be subject to a contagion effect where the suicidality of the distressed student impacts the RA adversely (Gould & Kramer, 2001; Range et al., 1988; Rudd et al., 2006; Spirito et al., 1989). Considering the wide range and prevalence of suicidal experiences on college campuses, a significant percentage of college students are likely already vulnerable to suicidality (Drum et al., 2009). Suicide prevention programs should exercise care in designing their training interventions as increasing performance demands on vulnerable RAs or undermining protective forces leave them increasingly at risk for adverse impacts.

The process by which suicidal contagion might impact RAs has been conceptualized from three theoretical vantage points: behavioral contagion, social learning theory, and an infectious disease model. Gould (2001) described suicide contagion as the process by which one suicide becomes a compelling model for successive suicides. It can be viewed within the larger context of behavioral contagion

where behaviors spread quickly and spontaneously through a group. Behavioral contagion theory holds that individuals have a preexisting motivation to perform a particular behavior, but yet also hold some resistance to performing it (Gould). The resulting approach-avoidance conflict may be resolved in favor of approach by degrading the individual's internal resistance to the behavior when the individual comes into contact with related behavior (Gould). While imitation or contagion of suicidal experiences among peers is generally not viewed as a primary cause of adolescent suicides, it may lower the suicidality threshold for resistance among vulnerable individuals (Lewis & Lewis, 1996). Therefore, under the behavioral contagion model, it may not be that individuals will learn to utilize suicide as a coping mechanism by observing others, but rather their defense to it may erode.

Social learning theory may help explain suicide contagion through its emphasis on the influence of modeling on imitative behavior (Gould, 2001). Under this theory, observing a person modeling the suicidal behavior may lower behavior restraints and encourage imitation. A third way of viewing suicide contagion flows from a public health or infectious disease model of contagion. This model may be useful in terms of articulating the roles of the agent or model, host or vulnerable individual, and the environmental characteristics such as the media (Gould).

Distressed adolescents are perceived as being vulnerable to behavioral contagion regarding suicide (Gould & Kramer, 2001; Range et al., 1988; Rudd et al., 2006; Spirito et al., 1989). Gould (2001) reported that research shows clearly that extensive media coverage of suicide is associated with a significant increase in the rate of suicide in the

geographic market exposed to the news, whether locally or nationally. Additionally, the magnitude of the increase in suicides is proportional to the amount, duration, and prominence of media coverage (Gould).

The rate of cluster suicides is highest among teenagers and young adults, indicating these individuals are more susceptible than those in other age groups to suicide contagion (Gould, 2001). With respect to the impact of media reporting on suicide in adolescents, however, some investigations have produced differing results, suggesting that different groups of adolescents may vary in their vulnerability to contagion in that the same media events produced different effects (Lewis & Lewis, 1996). Evidence of a contagion effect of suicide among friends and family members, however, is more consistent than the impact from the media. This may result from a stronger effect where intimates seem to reduce social deterrents working against suicide and to increase imitative behavior (Lewis & Lewis). Spirito and colleagues (1989) suggested that imitation of a friend, family member, or from the media is a relevant factor in adolescent suicide. Some have found that an advantage of a gatekeeper-oriented curriculum program targeted to adult staff in a high school setting, rather than student peers, is that it does not carry the same risk of imitation that may accompany the adolescent-based suicide prevention education programs (Gould & Kramer, 2001).

Students on college campuses can come into contact with suicidal students in a variety of contexts, not exclusively through suicide prevention programs. However, suicide prevention programs likely increase the frequency of such interactions as well as heighten the responsibility of the RA to intervene (Lewis & Lewis, 1996). In addition,

some at-risk youth may become involved in the suicide prevention program by becoming a helper, suggesting that the peer helpers themselves may experience suicidal symptoms prior to training (Lewis & Lewis). The authors cautioned that we have little information on the nature of the problems peer helpers confront, the type of support helpers receive, and the overall effectiveness of the programs they serve. We turn now to an examination of several prominent gatekeeper training programs.

Existing gatekeeper training programs

Gatekeeper programs incorporate a range of objectives including raising awareness of the problem of college student suicidality, increasing the ability of RAs to detect signs of suicidality in students, facilitating referrals for professional help, and engaging suicidal students interpersonally. Programs often rely predominately more on some aspects than others. The proposed study is a multi-featured program that explores all four components. This section reviews prominent programs to provide a context for the proposed study. The most comprehensive programs address all four objectives, while some address fewer.

Examples of less comprehensive gatekeeper training programs are school based programs that traditionally focused on helping high school staff identify students at risk for suicide and to refer them to help (CDC, 1992). These programs are not designed to replace professional mental health care or to encourage school staff to act as counselors. Rather they are intended to “sound the alarm” and refer students to professional help

(CDC). However, some programs have trained peers to develop counseling skills and intervene in more of a quasi-professional role (Gould et al., 2003; Herring, 1990).

The National Alliance on Mental Illness (NAMI) has created various training resources to educate gatekeepers in high schools that are somewhat more comprehensive. Their models tend to follow a socio-constructivist pedagogic approach, where they utilize people who have experienced suicidal events themselves or in their families to instruct the class. These programs draw on the personal experience of mental health consumers and family members who have experienced suicide or suicide attempts in their family and have been trained to help others. They also utilize the expertise of mental health professionals and educators (NAMI, 2010). The NAMI training provides instruction on identifying early warning signs of mental illness, how to anticipate responses by the family to the mental illness, a sharing of perspectives as to their experience of living with mental illness, and group discussion (NAMI). The NAMI program is less than fully comprehensive in that it focuses more on making referrals to professional help and less on engaging suicidal students interpersonally.

The Department of Nursing at Bloomsburg University of Pennsylvania established an on-campus NAMI chapter, which provides an illustration of this approach. The department initiated a suicide prevention program that appears more focused on raising awareness and increasing referrals than on active engagement by gatekeepers (Cook, 2007). The suicide prevention training taught faculty and students how to identify common signs of mental health difficulties and how to quickly intervene, including references to the counseling center or other mental health resources. The training also

emphasized maintaining student confidentiality and decreasing the stigma associated with seeking help for mental health problems (Cook).

Question, Persuade, Refer (QPR) training is one of the most comprehensive gatekeeper programs. This program trains staff on the topics of rates of youth suicide, warning signs and risk factors for suicide, procedures for asking a student about suicide, persuading a student to get help, and referring a student for help. The training generally includes campus specific based data to provide a local context of student suicidal behavior and the protocol for responding to suicidal students (Wyman et al., 2008).

QPR training is comprehensive in that it addresses all four components of raising awareness, increasing detection, increasing referrals, and engaging suicidal students. Wyman and colleagues (2008) sought to determine whether the success of a QPR training program lies in increasing gatekeeper knowledge and positive appraisals of training quality or whether success comes from stronger interpersonal relationships between gatekeepers and suicidal students. In their study, they examined whether staff questioning of students' suicidal behaviors were impacted most by the surveillance model or the communication model.

The surveillance model focuses on increasing gatekeeper knowledge of risk factors and attitudes about preventing suicide to enable them to more effectively respond to suicidal communications from students and refer them to professional help. In contrast, the communication model is more comprehensive as it seeks to change the nature of the transaction between the RA and student. This model holds that suicidal students' own attitudes and behaviors impact whether they will disclose their suicidality to others.

Consequently, the communication model programs focus on helping the staff interact with suicidal students to promote trust, decrease stigma and allow for a more integrative response between the student and helper (Wyman et al., 2008). The proposed study will compare components of the surveillance and communication models to determine their impact on the number of suicidal students utilizing professional help and on the RAs' mental health.

After the QPR training was implemented the number of staff inquiries about suicide directed to students increased, but only for those staff already communicating with students about suicide before the training (Wyman et al., 2008). Those staff entering the study with closer communication with students about emotional distress asked more students about suicide after training. The study results suggest that identifying more students at high risk for suicide will require expanding staff members' open communication with students about issues of emotional distress (Wyman et al.). An important finding of the study is that increased knowledge about suicidality and positive appraisals of the QPR training by the staff are not sufficient to increase suicide identification behaviors. This study demonstrates that the quality of the relationship between the suicidal student and the gatekeeper is more important than the knowledge of the gatekeeper. The authors recommended skill training for staff and interventions that modify students' help-seeking behaviors to supplement universal gatekeeper training (Wyman et al.).

Training content and supervision

Despite the various program composition issues presented in the suicide literature, the research has failed to clearly validate a comprehensive empirically supported peer-based gatekeeper training model (Kalafat & Elias, 1994; Westefeld et al., 2006; Wyman et al. 2008). More specifically, there appears to be little literature to empirically support the training and education of non-mental health professionals on college campuses such as RAs (Westefeld et al.). While the research examining the effectiveness of gatekeeper training is limited, some findings are encouraging in terms of gatekeepers being able to apply the knowledge and skills they acquire in training (Gould & Kramer, 2001). By drawing from theories of instructional design and providing competent trainers, campuses may increase the effectiveness of their gatekeeper programs.

The author believes that a RA based gatekeeper suicide prevention training model could be improved by incorporating instructional design techniques from the theory of Situated Cognition. This theory holds that with regard to learning, the learner and the learning environment cannot be separated (Wilson & Myers, 2000). One of the difficulties in working with suicidal students lies in managing the emotions that can be present or restricted (Wyman, et al.; Baumeister, 1990). Through Situated Cognition, gatekeepers would learn in environments that replicate the experience they will face outside of the classroom. For instance, to support student learning and enhance their ability to transfer their skills in working with suicidal students from the classroom to the residence halls, they should practice role playing scenarios of when and how to intervene (Wyman et al.).

In addition to providing a proper training environment, gatekeeper program efficacy may be impacted by the skill and knowledge base of the trainers. Lewis and Lewis (1996) found that while peer to peer helper counseling programs in high schools are widely used, they are often supervised by non-counseling professionals. They reported significantly greater numbers of completed suicides at those schools where programs are supervised by non-counseling professionals (Lewis & Lewis). The authors cautioned that non-counseling professionals are often not trained in issues such as privacy, confidentiality, dual relationships, establishing appropriate boundaries, risk assessment, and understanding the limits of competence to the extent a professional counselor would be (Lewis & Lewis).

When colleges proceed with training RAs, they should consider how to address several challenges that can induce stress in the RAs. First, RAs may encounter difficulty in observing change in a student when it occurs gradually and almost imperceptivity over time. Second, RAs may become desensitized to the changes over time. Third, RAs must learn to identify signs of distress in light of cultural influences. Fourth, RAs must be able to distinguish signs of low level distress from those indicating a crisis. Fifth, gatekeepers must be able to relate interpersonally to suicidal students to provide a trusting contact for students while also maintaining appropriate boundaries so that the RA remains healthy and safe. Sixth, RAs must manage the strain that can accompany increased role responsibility and serving in a quasi-professional role. Providing RAs and suicidal students with a professionally staffed anonymous source of help may serve to mitigate the impact of these challenges.

Telephone counseling and the use of anonymous helping resources

Promoting a professional, anonymous source of help through telephone counseling may facilitate greater help seeking by suicidal students. Professional help may be sought directly through professionally staffed telephone counseling or the telephone staff may refer the suicidal student to utilize in-person professional help. The stress accompanying a sense of responsibility on RAs will likely decrease as students shift from the RAs' care to professional help. Therefore, this study explores the possibility that the promotion of an anonymous source of help through professionally staffed telephone counseling might reduce potential adverse effects on RAs.

Telephone counseling may be effective to increase access to professional help as suicidal students may prefer to utilize an anonymous source of help over in-person counseling. Hotlines offer services 24 hours a day and so are available when counseling centers are closed. They also offer the freedom for callers to initiate and terminate contact (Gould, Greenberg, Munfakh, Kleinman, & Lubell, 2006). In addition, the anonymity of suicide prevention hotlines may allow callers to admit embarrassing things they would not disclose elsewhere (Gould & Kramer, 2001).

Beyond the area of suicidality, a study of AIDS prevention counseling found that potential clients are more likely to enroll in prevention programs through anonymous than confidential sources (Roffman, Picciano, Wickizer, Bolan, & Ryan, 1998). Students may also prefer to refer their friends to telephone counseling over in-person services. In a study of 253 10th grade students, Kalafat and Elias (1994) found that student participants

in suicide prevention training tended to refer their friends to a telephone hotline over a mental health center.

Telephone counseling appears to be an effective intervention in reducing the risk of suicide among those who utilize its services (King, Nurcombe, Bickman, Hides, & Reid, 2003). Despite the reported effectiveness of telephone counseling, few adolescents appear to utilize hotlines and they often hold stronger negative attitudes towards it than other sources of help (Gould et al., 2006). The current study explores the impact of having RAs promote telephone counseling as a professional helping resource to suicidal students.

Chapter 3: Proposed Research Study

Statement of Purpose

Gatekeeper training programs can be distinguished by the roles the gatekeepers assume. The broad roles include raising awareness of suicidality, increasing knowledge of warning signs, increasing referrals to professional help, and engagement by the gatekeeper with the suicidal student. The purpose of this proposed study is to explore the impact of participation in the program on the mental health of the gatekeeper. The study also seeks to discover if such programs reduce suicidal student reluctance to disclose suicidality to professionals after students have had contact with a gatekeeper.

The current study consists of a proposed controlled gatekeeper training program at the University of Texas at Austin where RAs are trained as gatekeepers under one of four conditions. Two sets of these conditions include high versus low helping intensity. The other two sets of conditions reflect referral options where RAs are encouraged to promote both anonymous and in-person professional help versus primarily promoting in-person professional help. The impact on suicidal students will be measured by their referral rates and utilization of professional helping resources. The impact on peer helpers will be measured by changes in their stress and suicidal ideation from before the training begins as compared to six months after program initiation.

College counseling centers lack information about whether a greater percentage of students would avail themselves of professional treatment if gatekeepers were trained to intervene with greater intensity. RAs in the low intensity condition will be trained to

identify and refer suicidal students to professional help. RAs in the high intensity condition will be trained to intervene in addition to identifying and referring suicidal students to professional help. To amplify the referral effect, the training to intervene in the high intensity condition will include material on how to help suicidal students calm down and focus their decision making as well as assist RAs in expressing empathy and achieving greater attunement with the suicidal student. This study also explores whether more suicidal students would avail themselves of professional help if RAs encouraged them to access a professional help option promising greater anonymity and less formality, such as through a professionally staffed telephone counseling based system.

The present study is important because college counseling centers are currently implementing gatekeeper training programs but lack the understanding of whether they effectively encourage suicidal students to utilize professional help and of the impact their RAs may endure. By understanding such impacts, college counseling centers can adjust their training programs to provide appropriate levels of responsibility to student gatekeepers and also ensure that they receive sufficient supervision and support to help them to maintain their mental health.

Method

Participants

The research study will analyze data from self-reported survey results from RAs working at the University of Texas at Austin. The study will coordinate with The Division of Housing and Food Services within the Division of Student Affairs at UT

Austin to train all RAs prior to the start of the fall academic term to serve as gatekeepers in the residence halls. It is expected that approximately 180 RAs are employed and will participate in the study. RAs unable to attend the training will be excluded from this study.

Procedures

Approval by Human Subjects Committee

The study will comply with all ethical issues and standards of research established by the American Psychological Association (2002) and the University of Texas at Austin. A research study proposal, draft of the training program, and survey instruments will be submitted to the Departmental Review Committee within the Department of Educational Psychology and the Institutional Review Board at the University of Texas at Austin.

Approval by the Division of Housing and Food Service

Prior to training or collecting data, a research proposal, draft of the training program, and survey instruments will be submitted to the Division of Housing and Food Services to gain their approval to implement this study with their RA staff.

Participant Assignment

Resident Assistants will be randomly assigned to participate in one of four gatekeeper trainings conditions. Since students are assigned to their work location by the staffing needs of the Hall Coordinators and the students are not able to select the location of the dorm they are assigned to work in (The University of Texas at Austin, 2009), this

study assumes that random assignment of students to work locations occurs at the time of hiring RAs.

Training Protocols

Training will be conducted by the University of Texas at Austin Counseling and Mental Health Center through its Suicide Prevention Program. This program currently employs full-time masters level counselors and doctoral level graduate assistants conducting suicide prevention training on the university campus. The existing training for RAs will be modified to account for the four study conditions.

All RAs will be trained to know of and enhance their ability to identify warning signs of suicide, practice in how to ask peers if they are thinking about suicide, awareness of professional helping resources, referral procedures, and ways to reduce the stigma of professional help seeking. All RAs will be trained to provide a range of helping resources to suicidal students, including in-person counseling at The University of Texas at Austin Counseling and Mental Health Center (CMHC), professionally staffed anonymous telephone counseling, The University of Texas at Austin Behavior Concerns Advice Line, 911 and non-emergency police phone numbers, SafePlace, and a national suicide hotline. One of the difficulties in working with suicidal students lies in managing the intense emotions that can be present. Through utilizing the learning principles of situated cognition, gatekeepers would learn in authentic environments that replicate as much as possible the experience they will face outside of the classroom.

Training Conditions

While all RAs will make both in-person and telephone counseling options available to suicidal students, RAs will be trained to promote primarily in-person counseling or provide equal emphasis to both in-person and telephone based counseling. In addition, RAs in the high intensity helping conditions will practice increasing their empathy and attunement as well as additional skills of how to soothe and help suicidal students focus their decision making. See Table 3.

Table 3: Treatment Conditions

		Professional Referral Resources Promotion	
		In-Person Counseling	In-Person + Telephone Counseling
Helping Intensity	Low	Condition 1 n = 45	Condition 2 n = 45
	High	Condition 3 n = 45	Condition 4 n = 45

Treatment Condition 1: RAs assigned to the first treatment condition will be trained to primarily promote in-person professional counseling through the CMHC. RAs in this treatment condition will be encouraged to refer suicidal students to professional help as quickly as possible and not encouraged to engage at a strong interpersonal level with them. Specifically, they will not be encouraged to attempt to calm and focus the suicidal student beyond what is necessary to get them professional help.

Treatment Condition 2: RAs assigned to the second treatment condition will be trained to promote both the in-person counseling services available at the CMHC as well

as telephone counseling as an anonymous professional helping resource for suicidal students. They will be encouraged to refer the suicidal student as quickly as possible to whichever professional resource the suicidal student chooses and not encouraged to engage students at a strong interpersonal level.

Treatment Condition 3: RAs assigned to the third treatment condition will be trained to primarily promote in-person counseling services available at the CMHC. The students in this treatment condition will also be trained to intervene more intensely to help calm and focus the suicidal student through increased empathy and attunement as an interim step before acquiring professional help.

Treatment Condition 4: Peer helpers assigned to the fourth treatment condition will be trained to promote both in-person and telephone counseling services for suicidal students. The RAs in this treatment condition will also be trained to intervene more intensely to help calm and focus the suicidal student through increased empathy and attunement as an interim step before acquiring professional help.

Data Collection

RAs will complete an online survey before training to measure their baseline scores on the Perceived Stress Scale-10 Item and the Beck Scale for Suicide Ideation. They will then complete the same measures six months later to measure the impact, if any, on the RA by participation in the gatekeeper program. RAs will be instructed to complete an online survey within one hour of each intervention they perform with a suicidal student and then again one week after the intervention. See Appendix A: Resident Assistant Online Survey.

All peer helpers will be instructed to follow up with the distressed student the day after the intervention and again one week after. During the follow up contacts, the RA should inquire as to their distress level and ask about any professional help seeking received. If students have not yet received professional help, RAs should remind them of available resources. RAs in the higher responsibility condition should also express additional empathy and attempt to provide high levels of attunement to the distressed student.

Emergency Procedures

In all training conditions if students are in a suicidal crisis the RA should call 911 for immediate assistance. RAs will also receive information on the signs of stress they may encounter within themselves when working with suicidal students and resources available to them for support. Hall Coordinators will also be trained to look for signs of distress in the RAs they supervise and receive education regarding available professional helping resources.

Confidentiality

This study will implement several procedures and policies to ensure confidentiality of both the students in distress as well as RAs. At no time will RAs be requested to provide the name of the suicidal student on any survey. The RAs will be required to keep track of the names of the students with whom they intervene only to facilitate follow up with those students. RAs will assign each student they intervene with a number, starting sequentially at #1, and enter that number in the surveys they complete. See Appendix B: RA Tracking Sheet. The developers of this study will not have access to

the suicidal students' names as they will be kept exclusively by the RAs. RAs will be instructed to delete the student's name from their list once they have completed their follow up and reporting.

To protect the confidentiality of the RAs, each RA will be assigned an identification number that they will submit with each survey they complete. The developers of this study will maintain a list of the names of the RAs and their identification number in a database separate from the one containing the study results in the event an RA requires a reminder as to his or her identification number. RAs will be able to log on to a secure web site to complete the survey from any internet connection.

Promotion

The author anticipates that some suicidal students will readily disclose their ideation to RAs while others may be encouraged to disclose through promotional efforts. RAs will be provided with signage to post on their door signifying that they are trained in helping suicidal students and are a safe place to turn. RAs will also be instructed to inform the students during hall meetings that if the students are in distress the RA is a safe person to confide in.

The message to the students will be tailored to address most of the reasons A. Burton Denmark (personal communication, December 22, 2009) found that students conceal their ideation, including feeling they are at low risk of harming themselves (18%), a desire to not impose on others (16%), a desire for privacy (15%), feeling help seeking would be pointless (13%), concerns of stigma (13%) and shame (7%), fear of repercussions (7%), and a perceived lack of confidants (3%). It is noteworthy to consider

that Burton Denmark found that 7% of students concealed their suicidal ideation out of a desire to not be interfered with. Since it is not anticipated that these students would voluntarily approach an RA for help, RAs will be trained to have both a proactive and reactive role.

Instruments

Resident Assistant Online Survey: Referrals to professional help by RAs and utilization by suicidal students will be tracked using the Resident Assistant Online Survey. See Appendix A. This survey allows the RA to indicate the number of referrals made and the type of help seeking sought by students.

Resident Assistant Tracking Sheet: RAs will track contacts and follow up to ensure study procedures are followed using the Resident Assistant Tracking Sheet. See Appendix B.

Perceived Stress Scale-10 Item (PSS-10): Relatively few attempts have been made to measure perceptions or appraisals of stress (Monroe, 2008). The PSS, however, has been referenced frequently in the literature in a variety of health-related contexts and with various populations (Mitchell, Crane, & Kim, 2008; Cohen, Kamarck, & Mermelstein, 1983). The PSS-10 measures the degree to which situations in one's life are appraised as stressful and how unpredictable, uncontrollable, and overloaded respondents find their lives (Mitchell et al.; Roberti, Harrington, & Storch, 2006; Cohen & Williamson, 1988). Participants respond to each question on a 5-point Likert scale ranging from 0 (never) to 4 (very often), indicating how often they have felt or thought a

certain way within the past month. Scores range from 0 to 40 with higher scores indicating more perceived stress.

While the original scale contained 14 items, Cohen and Williamson found the 10-item version allows for the assessment of perceived stress without any loss of psychometric quality over the longer 14-item version. The PSS was normed on a sample of 2,387 residents of the United States and found to have strong internal reliability (alpha coefficient = 0.78). Respondents in the age range of 18-29, the age range closest to the age range in the current study, reported an average score of 14.1 with a standard deviation of 6.2.

Construct validity was examined through analysis of other stress measures, health, health service utilization, health behaviors, life satisfaction, and help-seeking. Cohen and Williamson (1988) reported adequate construct validity as the PSS score was related to responses on other measures of appraised stress, showed a clear association between general illness and elevated stress, was slightly related to self-reports of help seeking behaviors, was inversely related to life satisfaction, and was related to higher levels of considering seeking help. The scale has been found to be a reliable and valid self-report measure of perceived stress within a nonclinical, multistate sample of U.S. college students (Roberti et al., 2006). The PSS-10 was also found to be highly reliable in the context of measuring stress related to having a family member commit suicide, with a Chronback's alpha of 0.91 and Spearman Brown's split-half reliability coefficient of 0.90. (Mitchell et al., 2008).

Beck Scale for Suicide Ideation (BSSI)

The BSSI is a 21 item self-report scale that assesses for the presence of suicidal ideation and risk for suicide (Beck & Steer, 1991). Participants select the response of a 3-point scale, ranging from 0 to 2 that best describes how they felt for the past week. Ratings on the first 19 items are summed to yield a total score ranging from 0 to 38. The last two items assess the number of previous suicide attempts and the seriousness of the intent to die associated with the last attempt. The scale screens for five factors, including intensity of suicidal ideation, active suicidal desire, suicide planning, passive suicide desire, and concealment. The BSSI has been normed with both adults and adolescent populations. Strong internal consistency has been reported (alpha = 0.96) and moderately reliable test-retest results have been found over a two week period (r=0.54) (Beck & Steer; Kumar & Steer, 1995; Rudd et al., 2006). In a recent study of 92 undergraduate college students, Rudd et al. (2006) found a coefficient alpha for the BSSI of 0.90. In that study, undergraduate students who read a list of suicide warning signs and then completed the BSSI produced a mean score of 0.25 and a standard deviation of 0.90.

Chapter 4: Data Analysis and Expected Results

The primary purpose of this study will be to examine the change in the number of suicidal students referred for professional help, the percentage utilizing professional help, and RA stress and suicidal thought measures across levels of helping intensity and referral promotion focus. Data collected from RAs reporting the number of students referred for and utilizing professional help will be analyzed using a two-way ANOVA where main effects and interaction effects will be examined. Data including PSS-10 and BSSI scores will be analyzed using Repeated-Measures ANOVA to detect the change in these measures on RAs over time.

Alpha will be set at 0.05 for all analyses.

Research Questions and Hypotheses

Research Question 1: Does training RAs to provide more intensive helping lead to varying utilization of professional services by suicidal students?

Hypothesis: It is anticipated that training RAs to intervene more intensely by helping suicidal students calm down and focus their decision making, as well as expressing empathy and greater attunement, will increase the number of referrals and the percentage of students utilizing professional help.

Rationale: Increased intensity of RA intervention could increase suicidal student referral to and utilization of professional help in several ways. Westefeld and colleagues (2005) found that only 26% of students are aware of mental health resources on campus. Utilizing a peer network to inform students of available helping resources would impact those students who desire help but do not know where to turn. Drum et al. (2009) found

that 46% of students did not tell anyone about their suicidal experiences. Those students who did confide tended to disclose to their peers. RAs trained in recognizing suicidal warning signs, initiating conversations that promote calming, focus, empathy, and attunement, and who are knowledgeable of helping resources may form a stronger interpersonal connection with students who previously concealed their ideation than those trained to intervene less intensely. In particular, as RAs are trained to improve their communication of empathy and attunement with the suicidal student, the RA may come to be seen as more of a trusted peer than RAs not so trained. As Wyman and colleagues (2008) noted, the quality of the relationship between the suicidal student and the gatekeeper is more important than the knowledge of the gatekeeper in terms of increasing referrals for help. It is expected that the stronger interpersonal connection would result in more referrals and greater acceptance of professional help by suicidal students.

A. Burton Denmark (personal communication, December 22, 2009) found that 13% of students did not disclosure their suicidal ideation because they thought it was pointless or that they would not benefit from the disclosure. Students are more likely to utilize professional helping resources if they believe they will be effective and meet their needs. Training RAs to help calm and focus the suicidal student would help both the students and RAs understand the students' perceived needs. When these needs are better understood, the RAs will likely have more success in connecting the students with professional help that students perceive as suitable. Additionally, 18% of students claimed they did not disclose their suicidal ideation because they believed they were at low risk of completing suicide. Educating peer helpers with information about a variety

of professional helping resources may facilitate a process for these students to seek help not necessarily for the suicidal ideation, but for other salient factors such as anxiety, depression, or relationship problems. A more empathetic and attuned gatekeeper would likely be more effective in facilitating this process for students.

Research Question 2: Does promoting anonymous, professional help via telephone counseling to suicidal students vary referral to and utilization of professional helping resources? *Hypothesis:* It is expected that the promotion of in-person professional counseling and anonymous, professionally staffed telephone counseling service would increase the number of students referred by RAs and the percentage of suicidal students who utilize professional help over the training condition where only in-person counseling is primarily promoted. In addition, it is expected that an interaction effect will be found. The author expects that RAs in the high intensity helping condition will channel suicidal students to professional help at a higher rate when both in-person and telephone counseling services are promoted than RAs in the low intensity group.

Rationale: Suicidal students may be inclined to disclose to professionally staffed telephone counseling as that resource may help them overcome some of their reasons for concealing. Of those students who disclose their ideation, 58% provided reasons that might be mitigated with the availability of professionally staffed anonymous helping resources (A. Burton Denmark, personal communication, December 22, 2009). 16% of the students claimed that they concealed their suicidal ideation based on concerns of imposing on others, 15% noted they were concerned with privacy, 13% were concerned with the stigma associated with talking about their ideation, 7% expressed that they felt

shame, and 7% were concerned about repercussions of disclosing. Based on their stated reasons for concealing their ideation, and the fact that they disclosed their ideation in an anonymous online survey, these students might be more willing to seek help from an anonymous source. Suicidal students may also be more willing to seek professional help from an anonymous source than an in-person source as the anonymity of suicide prevention hotlines may allow callers to admit embarrassing things they would not do elsewhere (Gould & Kramer, 2001). Not only might students prefer to seek anonymous help, but RAs may also be inclined to refer them there (Kalafat & Elias, 1994).

RAs in the high responsibility condition are expected to increase the rate at which students utilize professional help over those in the low responsibility condition when telephone counseling is added as a referral promotion option. The author hypothesizes this interaction based on the premise that by increasing helping intensity RAs will understand the needs of the suicidal students more than in the lower intensity condition. Armed with additional referral resources, it is expected that RAs will be better suited to leverage the additional resources through promotion and help the suicidal student utilize an appropriate resource. It is expected that this leveraging of resources will increase utilization of professional help by suicidal students at a faster rate than in the low intensity helping condition.

Research Question 3: Does training RAs in the more or less intensive helping condition and with a focus only on promotion of in-person versus in-person and

telephone counseling referrals for suicidal students impact RA suicidality and stress measures over time?

Hypothesis: It is expected that stress and suicidality measures for all conditions will increase over the six-month period. The author anticipates that training in the more intensive helping condition will increase suicidality and stress measures on RAs more than those in the less intensive condition. It is further expected that stress and suicidality will increase, but at a lower rate, for those RAs who are trained to promote both telephone and in-person counseling as compared to those RAs trained to primarily promote in-person counseling. An interaction effect is expected with stress and suicidality measures of those students trained in the high intensity condition with promotion of both in-person and telephone counseling as compared to those in the lower intensity condition.

Rationale: The hypothesis that RAs in the more intensive helping condition will experience more suicidality and stress is supported by two areas of research: the contagion effect and the impact on professional clinicians. The potential adverse impact on RAs of exposure to suicidal content and suicidal peers has been well documented in the literature (CDC, 1992; Gould et al., 2003; Gould & Kramer, 2001; Lewis & Lewis, 1996; Range et al., 1988; Rudd et al., 2006; Spirito et al., 1989). In addition, Lewis and Lewis found evidence that the contagion effect of suicide among intimates is more consistent than the impact from the media. This finding suggests that exposure to suicidal experiences with those one is interpersonally connected to has a stronger impact than exposure through less intimate sources. The authors suggest that exposure within the

closer interpersonal connection seems to reduce social deterrents working against suicide and increase imitative behavior. It is anticipated that as RAs become more interpersonally connected to suicidal peers, the potential for suicidal contagion increases.

Professional clinicians working with suicidal clients are also subject to emotional strain (Hendin, et al., 2006; Collins, 2003). As RAs become trained as more intensive helpers, they may assume a quasi-professional role. The author expects that as RA training intensity increases, so does their sense of responsibility for the well-being of the suicidal student. Having a sense of high responsibility for suicidal students can add considerable stress on RAs, partly from the possibility of student death and also from the difficulty in working interpersonally with this challenging group of students.

It is expected, however, that transferring care of students to professional help would provide relief for RAs as they may feel less responsible for the well-being of the suicidal students once those students are in others' care. The author expects that RAs promoting both in-person and telephone counseling referral options would have a greater percentage of students accept professional help and, therefore, reduce the burden on RAs more than in the in-person counseling only promotion condition.

As noted under research question 2, the author anticipates that RAs trained in the high intensity helping condition with training to promote both in-person and telephone counseling will be more effective in helping suicidal students utilize professional resources than those in the low intensity helping condition. The author expects that this increased utilization of professional help by suicidal students will result in lowering the

RAs' exposure to stress and suicidal contagion at a faster rate than RAs in the low helping intensity condition.

Preliminary Analyses: Two-Way ANOVA

In order to ensure compliance with the requirements of a two-way ANOVA analysis, preliminary analyses will be conducted. Prior to testing the research hypotheses regarding the impact of training on student referrals and utilization of professional help using a two-way ANOVA, a case analysis will be performed where the distribution of the number of referrals and attendance (the dependent variables) will be inspected for apparent outliers. In addition, SPSS version 16.0 will be used to determine if any standardized residuals have absolute values greater than 2.5. In the event of potential outliers, a sensitivity study will be conducted to determine the impact of the outliers on the study results. If the presence of outliers appears to impact study results, a decision will be made and documented as to whether to continue with the analysis with the outliers or discard them. The validity of the ANOVA assumptions will also be explored before testing the research hypotheses, including the independence, equal variances, and normality assumptions.

A power analysis was conducted using G*Power software, version 3.1.2 (Faul, Erdfelder, Lang, & Buchner, 2007), to determine the approximate number of participants required to obtain a statistically significant finding in the proposed study. An overall model with a moderate effect size of $R^2 = 0.25$ and four independent variables was used to determine sample size. It was determined that a sample size of 158 RAs was adequate

to achieve 80% power. As such, the proposed sample of 180 RAs will be sufficient for the current study.

Preliminary Analyses: Repeated Measures ANOVA

In order to ensure compliance with the requirements of a Repeated-Measures ANOVA analysis, preliminary analyses will be conducted. Prior to testing the research hypotheses regarding the impact of gatekeeper training and participation on RAs using a Repeated-Measures ANOVA, a case analysis will be performed where the results of stress and suicidality indicators will be inspected for apparent outliers. The procedures for the Repeated-Measures ANOVA case analysis are the same as those for the Two-Way ANOVA. The validity of the ANOVA assumptions will be explored before testing the research hypotheses, including between subjects independence, between groups equal variances, sphericity, equal population covariance matrices, and multivariate normality assumptions.

A power analysis was conducted using G*Power software, version 3.1.2 (Faul et al., 2007), to determine the approximate number of participants required to obtain a statistically significant finding in the proposed study. An overall model with a moderate effect size of $R^2 = 0.25$, with two groups and 2 measurements, was used to determine sample size. The model assumes no violation of sphericity and provides an Epsilon value of 1. It was determined that a sample size of 34 was adequate to achieve 80% power. As such, the proposed sample of 180 RAs will be sufficient for the current study.

Primary Analysis: Tests of Research Questions

To answer research questions 1 and 2, a Two-Way ANOVA analysis will be conducted to compare RAs trained in the high intensity versus low intensity helping groups and those in the two referral promotion groups. F test results will be examined for evidence of an interaction effect, followed by an examination of main effects of group training. If interaction or main effects are found, a partial omega squared will be calculated to determine effect size. The Fischer's LSD approach will be utilized to conduct t-tests and compare groups to each other. For the purposes of these analyses, professional help will include accessing either in-person or telephone-based counseling.

Research Question 1: Does training RAs to provide more intensive helping lead to varying utilization of professional services by suicidal students?

Test of Hypothesis 1: The analysis will utilize a Two-Way ANOVA to examine interaction and main effects of group differences for the number of students referred for professional help. The analysis will also examine interaction and main effects of group differences for the number of students utilizing professional help as a percentage of those referred.

Research Question 2: Does promoting anonymous, professional help via telephone counseling to suicidal students vary referral to and utilization of professional helping resources?

Test of Hypothesis 2: The analysis will utilize a Two-Way ANOVA to examine the interaction and main effects of group differences for the number of students referred for professional help. The analysis will also examine interaction and main effects of

group differences for the number of students utilizing professional help as a percentage of those referred.

Research Question 3: Does training RAs in the more or less intensive helping condition and with a focus only on promotion of in-person versus in-person and telephone counseling referrals for suicidal students impact RA suicidality and stress measures over time?

Test of Hypothesis 3: A Repeated-Measures ANOVA will be conducted to compare RAs trained in the high intensity versus low intensity helping groups and those in the two referral promotion groups. An adjusted F test, utilizing a Greenhouse-Geisser epsilon, will be examined for evidence of an interaction effect, followed by an examination of main effects of group training. RA scores on the PSS-10 and BSSI will be compared from those reported pre-training to six months after training. If interaction or main effects are found, a partial eta squared will be calculated to determine effect size and t-tests will be conducted to compare the between-subjects and within-subjects factors.

Chapter 5: Discussion and Limitations

The proposed study seeks to assess how differing levels of helping intensity and promoting two distinct service delivery modalities by RAs in a suicide prevention program may impact the rate at which suicidal students seek professional help. It also examines the impact on the RAs' stress and suicidality resulting from participation in the program. It is expected that while expanded helping intensity will facilitate more suicidal students engaging in professional help, it will also add greater role responsibility and potentially adverse mental health outcomes to RAs. The author anticipates that adverse mental health impacts on RAs will be mitigated by providing anonymous professional referral options as suicidal students may utilize professional help more quickly, thereby reducing the gatekeeper's sense of responsibility.

There are several limitations to this study. First, this study explores at the macro level whether RA distress increases over time while participating in the suicide prevention program. A separate, and important, question is how much allostatic load a person can bear. Adding some stress to RAs in order to help suicidal students may seem appropriate from a university policy perspective, but more information is needed to determine how much added stress is detrimental to RAs. The answer to this question will likely vary by individual and programs may be able to temper any adverse impact by providing more support to helpers. In addition, future research could explore the use of supervision and support to lessen the impact on RAs. Programs should, however, consider that as they add support services they may treat RAs more like professionals or para-professionals, thereby increasing role responsibility and potentially adverse

outcomes. Future research should explore the point at which RAs perceive themselves as responsible for others to help counseling centers understand appropriate allocations of student responsibilities.

Second, this study does not distinguish between the nuances of individual circumstances. For instance, the intensity of interventions, the relationship of the helper to the suicidal student, and the outcome of prior interventions could all impact the peer helper. In addition, this study does not control for personal events occurring in RAs lives that may impact their stress and suicidality levels. Examining qualitative data regarding the gatekeeper experiences as well as reviewing case studies could add valuable insight into the perceived experience of the student gatekeeper.

Third, there is the possibility for contamination of training material between the study conditions. Wyman et al. (2008) noted in a high school based suicide prevention study that QPR training led to substantial school-level variation in knowledge and appraisals, as well as suicide identification behaviors. This finding suggests that staff working together tend to share attitudes and commitment to suicide prevention activities because of school-level contextual influences. To counter this effect, RAs will be instructed not to share their training information with other RAs. It is expected that this approach will help, but may not fully counter the impact of contaminating the training interventions between the conditions.

Implications

Significant results would lend support for increasing the intensity with which RAs intervene with suicidal students to increase rates of referrals and utilization of professional help. Such findings would support expanding efforts by campus counseling centers to utilize peer networks to connect suicidal students to professional help. However, findings indicating that RAs report higher levels of stress and suicidality as a result of participation in gatekeeper programs would be concerning. Based on such findings, further research would be required to understand how to mitigate these adverse impacts on RAs. Demonstrating that telephone-based professional counseling increases suicidal student utilization of professional help could help counseling centers implement programs that lessen the potential adverse impacts on RAs. If student stress and suicidality are lessened with the promotion of telephone counseling, universities would be encouraged to incorporate such systems into their suicide prevention programs.

This study of engaging RAs in the process of identification and referral of suicidal students for professional help constitutes a valuable extension of a counseling center's reach. Future research should explore how individual differences in gatekeepers, such as attachment styles, resilience, or coping strategies impact their ability to handle the stress of being a gatekeeper. In addition, suicide prevention programs should consider the support needed to reduce the risk to gatekeepers. A further extension may ultimately shift the gatekeeper expertise to the distressed students themselves. Helping the suicidal student understand the impact of stress, social connection, and other forms of coping could take some of the responsibility off of peer gatekeepers and give increased resources

directly to the students who need them. However, as with RAs, suicidal students may be adversely impacted by such exposure to suicide prevention content. Greater understanding of the impact of gatekeeper training on RAs is a valuable step in understanding how to facilitate student help seeking in safe and effective ways.

Appendix A: Resident Assistant Online Survey

RA #_____
Student #_____
Today's Date _____
Indicate whether this report is from your initial contact or 1 week follow up:
___Initial contact
___1 week follow up

Date of this contact: _____

Did you advise the student to seek professional help?
___Yes
___No

What type of professional help did the student seek?
___Counseling and Mental Health Center
___Telephone counseling (for students in treatment conditions containing this option)
___None
___Other, please explain _____

Appendix B: RA Tracking Sheet

Student Name	ID #	Contact Information	Initial Contact Date	Second Contact Date	Third Contact Date	Initial Online Survey Complete?	Follow-up Survey Complete?	Notes

References

American College Health Association. (2008). *American College Health Association – National College health Assessment: Reference group data report spring 2008.* Baltimore: American College Health Association.

American Psychological Association. (2002). *Ethical principles of psychologists and code of conduct.* Washington, DC: Author.

Baumeister, R. (1990). Suicide as escape from self. *Psychological Review, 91,* 90-113.

Beck, A., & Steer R. (1991). *Manual for the Beck Scale for Suicidal Ideation.* San Antonio, Texas: Psychological Corporation.

Centers for Disease Control and Prevention. (1992). *Youth suicide prevention programs: A resource guide.* Atlanta, GA: National Center for Injury Prevention and Control.

Centers for Disease Control and Prevention (2006). *Suicide Prevention: Youth Suicide.* Retrieved December 29, 2009 from http://webappa.cdc.gov/sasweb/ncipc/leadcaus10.html

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385-396.

Cohen, S. & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In *The social psychology of health.*, The Claremont Symposium on Applied Social Psychology (pp. 31-67). Thousand Oaks, CA US: Sage Publications, Inc.

Collins, J. M. (2003). Impact of Patient Suicide on Clinicians. *Journal of the American Psychiatric Nurses Association*, *9*(5), 159-162.

Cook, L. (2007). Striving to help college students with mental health issues. *Journal of Psychosocial Nursing & Mental Health Services, 45*, 40-44.

Doron, A., Stein, D., Levine, Y., Abramovitch, Y., Eilat, E., & Neuman, M. (1998). Physiological reactions to a suicide film: Suicide attempters, suicide ideators, and nonsuicidal patients. *Suicide and Life-Threatening Behavior*, *28*(3), 309-314.

Drum, D. J., Brownson, C., Burton Denmark, A., & Smith, S. E. (2009). New data on the nature of suicidal crises in college students: Shifting the paradigm. *Professional Psychology: Research and Practice*, *40*(3), 213-222.

Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39 (2),* 175-191.

Freedenthal, S. L. (2006). The help not taken: Youth suicidality and mental health service use. (Doctoral dissertation, University of Washington, 2005). *Dissertation Abstracts International, 66(10-A),* 3,809.

Furr, S. R., Westefeld, J. S., McConnell, G. N., & Jenkins, J. M. (2001). Suicide and depression among college students: A decade later. *Professional Psychology: Research and Practice*, *32*(1), 97-100.

Gagnon, A., Davidson, S. I., Cheifetz, P. N., Martineau, M., & Beauchamp, G. (2009). Youth suicide: A psychological autopsy study of completers and controls. *Vulnerable Children and Youth Studies*, *4*(1), 13-22.

Gallagher, R.P. (2004). *National Survey of Counseling Center Directors*. Arlington, VA: International Association of Counseling Services, Inc.

Garland, A. F., & Zigler, E. (1993). Adolescent suicide prevention: Current research and social policy implications. *American Psychologist*, Adolescence, *48*(2), 169-182.

Gould, M. S. (2001). Suicide and the media. In *The clinical science of suicide prevention.*, Annals of the New York Academy of Sciences; vol. 932 (pp. 200-224). New York, NY US: New York Academy of Sciences.

Gould, M. S., Greenberg, T., Munfakh, J. L., Kleinman, M., & Lubell, K. (2006). Teenagers' Attitudes about Seeking Help from Telephone Crisis Services (Hotlines). *Suicide and Life-Threatening Behavior*, *36*(6), 601-613.

Gould, M. S., Greenberg, T., Velting, D. M., & Shaffer, D. (2003). Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*(4), 386-405.

Gould, M. S., & Kramer, R. A. (2001). Youth suicide prevention. *Suicide and Life-Threatening Behavior*, *31*, 6-31.

Gray, C. (2007). The university-student relationship amidst increasing rates of student suicide. *Law and Psychology Review, 31,* 137-153.

Haas, A., Hendin, H, & Mann, J. (2003). Suicide in College Students. *American Behavorial Scientist, 46*, 1224 – 1240.

Hendin, H., Haas, A. P., Maltsberger, J. T., Koestner, B., & Szanto, K. (2006). Problems in Psychotherapy With Suicidal Patients. *American Journal of Psychiatry, 163(1),* 67-72.

Herring, R. (1990). Suicide in the middle school: Who said kids will not? *Elementary School Guidance & Counseling*, *25*(2), 129-137.

Joiner, T. E. J. (2009). Suicide prevention in schools as viewed through the interpersonal-psychological theory of suicidal behavior. *School Psychology Review*, *38*(2), 244-248.

Kalafat, J., & Elias, M. (1992). Adolescents' experience with and response to suicidal peers. *Suicide and Life-Threatening Behavior*, *22*(3), 315-321.

Kalafat, J., & Elias, M. (1994). An evaluation of a school-based suicide awareness intervention. *Suicide and Life-Threatening Behavior*, *24*(3), 224-233.

Kalafat, J., & Elias, M. J. (1995). Suicide prevention in an educational context: Broad and narrow foci. *Suicide and Life-Threatening Behavior*, Suicide prevention: Toward the year 2000, *25*(1), 123-133.

King, R., Nurcombe, B., Bickman, L., Hides, L., & Reid, W. (2003). Telephone counselling for adolescent suicide prevention: Changes in suicidality and mental state from beginning to end of a counselling session. *Suicide and Life-Threatening Behavior*, *33*(4), 400-411.

Kisch, J., Leino, E. V., & Silverman, M. M. (2005). Aspects of Suicidal Behavior, Depression, and Treatment in College Students: Results from the Spring 2000

National College Health Assessment Survey. *Suicide and Life-Threatening Behavior*, *35*(1), 3-13.

Kumar, G., & Steer, R. A. (1995). Psychosocial correlates of suicidal ideation in adolescent psychiatric inpatients. *Suicide and Life-Threatening Behavior*, *25*(3), 339-346.

Lewis, M. W., & Lewis, A. C. (1996). Peer helping programs: Helper role, supervisor training, and suicidal behavior. *Journal of Counseling & Development*, *74*(3), 307-313.

Mitchell, A. M., Crane, P. A., & Kim, Y. (2008). Perceived stress in survivors of suicide: Psychometric properties of the Perceived Stress Scale. *Research in Nursing & Health*, *31*(6), 576-585.

Monroe, S. M. (2008). Modern approaches to conceptualizing and measuring human life stress. *Annual Review of Clinical Psychology*, *4*, 33-52.

Muuss, R. (1995). Theories of Adolescence, New York: McGraw-Hill.

National Alliance of Mental Illness. *Education, Training & Peer Support Programs.* Retrieved January 1, 2010 from http://www.nami.org/template.cfm?section=Education_Training_and_Peer_Support_Center

Overholser, J. C., Hemstreet, A. H., Spirito, A., & Vyse, S. (1989). Suicide awareness programs in the schools: Effects of gender and personal experience. *Journal of the American Academy of Child & Adolescent Psychiatry*, *28*(6), 925-930.

Range, L. M., Goggin, W. C., & Steede, K. K. (1988). Perception of behavioral contagion of adolescent suicide. *Suicide and Life-Threatening Behavior*, *18*(4), 334-341.

Rihmer, Z. (1996). Strategies of suicide prevention: Focus on health care. *Journal of Affective Disorders, 39*, 83-91.

Roberti, J. W., Harrington, L. N., & Storch, E. A. (2006). Further Psychometric Support for the 10-Item Version of the Perceived Stress Scale. *Journal of College Counseling*, *9*(2), 135-147. doi: Article.

Roffman, R. A., Picciano, J., Wickizer, L., Bolan, M., & Ryan, R. (1998). Anonymous enrollment in AIDS prevention telephone group counseling: Facilitating the participation of gay and bisexual men in intervention and research. *Journal of Social Service Research*, Social Work Research with Minority and Oppressed Populations: Methodological Issues and Innovations, *23*(3-4), 5-22.

Rudd, M. D., Mandrusiak, M., Joiner, T. E. J., Berman, A. L., Van Orden, K. A., & Hollar, D. (2006). The Emotional Impact and Ease of Recall of Warning Signs for Suicide: A Controlled Study. *Suicide and Life-Threatening Behavior*, *36*(3), 288-295.

Schwartz, A.J. (2006). College student suicide in the United States: 1990-1991 through 2003-2004. *Journal of American College Health, 54,* 31-352.

Schwartz, L. J., & Friedman, H. A. (2009). College student suicide. *Journal of College Student Psychotherapy*, *23*(2), 78-102.

Shaffer, D., Garland, A., Vieland, V., & Underwood, M. (1991). The impact of curriculum-based suicide prevention programs for teenagers. *Journal of the American Academy of Child & Adolescent Psychiatry*, *30*(4), 588-596.

Silverman, M. M., Meyer, P. M., Sloane, F., Raffel, M., & Pratt, D. M. (1997). The Big Ten Student Suicide Study: A 10-year study of suicides on midwestern university campuses. *Suicide and Life-Threatening Behavior*, *27*(3), 285-303.

Spirito, A., Brown, L., Overholser, J., & Fritz, G. (1989). Attempted suicide in adolescence: A review and critique of the literature. *Clinical Psychology Review*, *9*(3), 335-363.

Suicide Prevention Resource Center. (2004). Promoting mental health and preventing suicide in college and university settings. Newton, MA: Education Development Center.

The United Stated Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, National Mental Health Information Center, Center for Mental Health Services. (2001). *Suicide Prevention: Desktop Quick Reference Tool for Crisis Workers: How Are You Feeling About this Call?* Retrieved January 1, 2010 from http://www.suicidepreventionlifeline.org/riskQuestions/default.aspx

The University of Texas at Austin, Division of Housing and Food Service (2009). *Frequently Asked Questions for Resident Assistant Selection.* Retrieved December 29, 2009, from http://www.utexas.edu/student/housing/index.php?site=19&scode=0&id=2269

Weber, B., Metha, A., & Nelsen, E. (1997). Relationships among multiple suicide ideation risk factors in college students. *Journal of College Student Psychotherapy*, *11*(3), 49-64.

Westefeld, J. S., Homaifar, B., Spotts, J., Furr, S., Range, L., & Werth, J. L. J. (2005). Perceptions concerning college student suicide: Data from four universities. *Suicide and Life-Threatening Behavior*, *35*(6), 640-645.

Westefeld, J., Button, C., Haley, J, Kettmann, J., MacConnell, J., Sandil, R., & Tallman, B. (2006). College Student Suicide: A Call to Action. *Death Studies, 30*, 931–956.

Wyman, P. A., Brown, C. H., Inman, J., Cross, W., Schmeelk-Cone, K., Guo, J., et al. (2008). Randomized trial of a gatekeeper program for suicide prevention: 1-year impact on secondary school staff. *Journal of Consulting and Clinical Psychology*, *76*(1), 104-115.

Wilson, B. & Myers, K. (2000). Situated Cognition in Theoretical and Practical Context. In D. Jonassen & S. Land (Eds.), *Theoretical Foundations of Learning Environments* (pp. 57-88). Mahwah, NJ: Lawrence Erlbaum.